

IN THE CLAIMS:

Please amend the claims such that the pending claims read as follows:

3. A system, including
an input port for receiving network packets;
a sampling element for selecting a fraction of those packets for review, said
sampling element including a feedback element for adaptively altering said fraction;
a queue of selected packets;
a packet-type detector coupled to said queue; and
a frequency measurement element coupled to said packet-type detector;
wherein said feedback element is responsive to a length of said queue.
5. A system as in claim 3, wherein said feedback element is responsive to a load
on said frequency measurement element.
6. A system as in claim 3, wherein said feedback element is responsive to a
frequency measure determined by said frequency measurement element.

7. A method, including steps for sampling a set of packets at a network interface of a switch, said steps for sampling including steps for adaptively altering a fraction of said packets for selection;

wherein said steps for adaptively altering a fraction of said packets for selection include steps for

maintaining a queue of selected packets; and

altering said fraction in response to a length of said queue.

9. A method as in claim 7, wherein said steps for adaptively altering a fraction of said packets for selection include steps for

measuring a frequency of packets of a known type within said selected packets;

altering said fraction in response to a load imposed by said steps for measuring.

10. A method as in claim 7, wherein said steps for adaptively altering a fraction of said packets for selection include steps for altering said fraction in response to two or more factors responsive to said selected packets.

11. A method as in claim 7, including steps for determining a frequency of packets of a known type within said selected packets.

12. A method as in claim 11, including steps for determining an error range for said measured frequency.

13. A method as in claim 11, including steps for
setting a control parameter;
sampling said received packets in response to said control parameter, to provide a queue of sampled packets;
comparing a length of said queue with a threshold;
altering said control parameter in response to said threshold.

14. A method as in claim 13, wherein said control parameter is a fraction of said received packets to sample for said queue.

15. A method as in claim 13, wherein said threshold includes at least one of: a lower bound for said length, an upper bound for said length.

16. A method as in claim 13, wherein said threshold includes a lower bound for said length and said steps for altering said control parameter operate to lengthen said queue in response to said steps for comparing.

17. A method as in claim 13, wherein

said control parameter is a fraction of said received packets to sample for said queue;

said threshold includes a lower bound for said length; and

said steps for altering said control parameter decrease said control parameter in response to said steps for comparing.

18. A method as in claim 13, wherein said threshold includes an upper bound for said length and said steps for altering said control parameter operate to shorten said queue in response to said steps for comparing.

19. A method as in claim 13, wherein
said control parameter is a fraction of said received packets to sample for said queue;

said threshold includes an upper bound for said length; and

said steps for altering said control parameter increase said control parameter in response to said steps for comparing.

20. A method as in claim 13, wherein said steps for altering said control parameter operate to maintain said control parameter constant for at least a selected number of sampled packets.

21. A method as in claim 13, wherein said steps for sampling do not produce skew.

22. A system including
means for collecting aggregate information about network traffic;
means for maintaining processor load relatively constant for a processor
controlling said means for collecting despite substantial variation in network traffic;
wherein said means for collecting and said means for maintaining include an input
port for receiving network packets, a sampling element for selecting a fraction of those packets
for review, said sampling element including a feedback element for adaptively altering said
fraction, a queue of selected packets, a packet-type detector coupled to said queue, and a
frequency measurement element coupled to said packet-type detector; and
wherein said feedback element is responsive to a length of said queue.

23. A system as in claim 3, wherein a default value for said fraction is selected
response to a bandwidth of said input port.

24. A system as in claim 23, wherein said fraction is adaptively altered based on a
presence or absence of a particular type of packet selected from among plural types of packets.

25. A method as in claim 7, wherein a default value for said fraction is selected response to a bandwidth of said network interface.

26. A method as in claim 25, wherein said fraction is adaptively altered based on a presence or absence of a particular type of packet selected from among plural types of packets.

27. A system as in claim 22, wherein a default value for said fraction is selected response to a bandwidth of said input port.

28. A system as in claim 27, wherein said fraction is adaptively altered based on a presence or absence of a particular type of packet selected from among plural types of packets.